

**10 August 1994**



**Maintenance**

**CONTROLLED INTERVAL EXTENSION (CIE)  
PROGRAMS**

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Supersedes AFMCR 66-39, 25 May 1984

Pages: 4  
Distribution: F;X

This instruction implements AFRD 21-1, Managing Aerospace Equipment Maintenance. It provides guidance and procedures for establishing and monitoring CIE programs for aerospace equipment.

**SUMMARY OF CHANGES**

This revision aligns the instruction with AFRD 21-1.

**1. Purpose.** CIE programs set up controlled conditions for extending maintenance and inspection intervals without sacrificing safety of flight or reliability.

**2. Terms and Definitions .** Terms and abbreviations used in this instruction are listed in attachment 1.

**3. Procedures.** Programmed depot maintenance (PDM) intervals are best determined by evaluating aircraft safety and reliability requirements, compared to weapon system and cost effectiveness. This technique relies heavily on maintenance requirements, known operational limits, and engineering judgment. By allowing a percentage of the force to exceed the established PDM interval, then comparing the amount of wear and damage found on them with that found on baseline PDM aircraft, the possibility of extending the interval can be evaluated. This emphasis on the extension of the interval for the purpose of increasing mission readiness and reducing overall cost must be done without sacrificing safety of flight or reliability.

3.1. CIE programs will consist of plateaus. To provide an acceptable confidence level, the number of aircraft placed on each plateau will follow the CIE sample sizes shown below. The time between plateaus is usually 6 to 12 months. Factors such as PDM tasks, missions, experience, environment and hourly or calendar age will be considered in determining time between plateaus and CIE aircraft. The CIE sample size for the mission, design and series (MDS) force will be determined by deducting the following from the total MDS inventory: aircraft in storage at the Aerospace Maintenance and Regeneration Center, aircraft on bailment, aircraft on loan to other government agencies, and aircraft belonging to foreign countries supported under international logistics programs.

**Figure 1. CIE Sample Size.**

Force Size	Sample Size
37-56	11
57-109	12
110-399	13

NOTE: CIE programs are not required for MDS forces of 36 or less.

3.2. Example. For a force size of 100 aircraft with a 36-month PDM cycle and a CIE program for 42, 48, and 54 months, a total of 36 aircraft with 12 aircraft at each plateau will be required.

3.3. The major command (MAJCOM) Maintenance Requirements Review Board (MRRB) is the authority for changes to the CIE sample sizes.

3.4. The selection of CIE sample aircraft will be finalized by coordination with the using command or commands.

3.5. Close observation of the effects of CIE on readiness and cost effectiveness is an integral part of the CIE program and will be a major consideration for continuing such an effort.

3.6. It may be necessary to selectively set up more thorough phased or isochronal inspection requirements on CIE sample aircraft to ensure critical equipment or components are in operating condition and to promote confidence in continued operation.

3.7. At the end of the CIE period, each CIE sample aircraft will be scheduled for PDM and considered as a prime candidate for including in an ACI sample.

**4. Responsibilities.** This instruction assigns the following responsibilities:

**4.1. MAJCOM MRRB.**

4.1.1. Identifies those systems for which a CIE program is recommended.

4.1.2. Exercises surveillance over CIE programs.

4.1.3. Reviews annually, as part of the PDM review, proposed CIE programs and the results of existing CIE programs.

4.1.4. Evaluates system program director (SPD) requests for deviations from CIE sample sizes.

**4.2. ALC MRRB.**

4.2.1. Reviews annually, as part of the PDM review, proposed CIE programs and the results of existing CIE programs.

**4.3. SPD.**

4.3.1. Sets up and monitor required CIE programs for assigned aircraft.

4.3.2. Determines CIE program needs to include the length of extension, corresponding plateaus, and any special inspections required.

4.3.3. Encourages the using commands to participate in the CIE program by requesting their recommended extension intervals and additional inspection needs.

4.3.4. Publishes a special -6 technical order listing CIE aircraft by serial number and those additional special inspection requirements necessary to ensure airworthiness during the extended period.

4.3.5. Formulates the proposed CIE program as an integral part of the PDM package and submits for ALC and MAJCOM MRRB review.

4.3.6. Summarizes results of CIE programs as an integral part of the PDM package and submits for ALC and MAJCOM MRRB review.

4.3.7. Analyzes CIE report data and correlate with data from ACI, PDM, field reports, material deficiencies, accident reports and incident reports to develop recommendations for PDM interval changes.

4.3.8. Makes adjustments to technical order and depot inspection requirements resulting from analysis of CIE data.

#### **4.4. Source of Repair (Organic or Contract).**

4.4.1. Accomplishes ACI and PDM on CIE aircraft as programmed by the SPD.

4.4.2. Reports significant deficiencies in detail immediately upon discovery to the responsible SPD for guidance, corrective action, or disposition.

**5. Interface with Other Programs.** ACI type reports of PDM inspections conducted on CIE and base-line PDM aircraft will provide data for analysis under the CIE program. Consideration should be given to combining ACI, PDM, and CIE programs on the same aircraft.

GARY D. DECKARD, Col, USAF  
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## Attachment 1

### TERMS AND ABBREVIATIONS

#### **A1.1. The following terms and abbreviations are used in this instruction:**

**A1.1.1. Analytical Condition Inspection (ACI).** The systematic disassembly and inspection of a representative sample of aircraft to find hidden defects, deteriorating conditions, corrosion, fatigue, overstress and other deficiencies in the aircraft structure or systems.

**A1.1.2. Controlled Interval Extension (CIE).** The controlled extension of a programmed depot maintenance interval based on condition analyses of a representative sample of aircraft. This concept of a controlled interval adjustment can also apply to the reduction of depot maintenance intervals.

**A1.1.3. Maintenance Requirements Review Board (MRRB).** A panel that assures all valid depot level maintenance requirements are evaluated and scheduled for appropriate fiscal year accomplishment. The process for this assurance involves an annual on-site review of the proposed maintenance program for each weapon system to assess the depot interval, the time in depot (flow days), and the validity of each detailed task in the work package. The panel is comprised of using command representatives and AFMC engineering, funding and aircraft maintenance experts. Changes to an approved maintenance program must be submitted with complete justification to the MRRB prior to incorporation in the work package and submission for funding. MRRBs are convened at the Air Logistics Center and major command levels.

**A1.1.4. Plateau.** The number of months a sample number of aircraft can exceed the normal programmed depot maintenance interval.

**A1.1.5. Programmed Depot Maintenance (PDM).** Depot level inspections and maintenance scheduled on a cyclic basis.